

A new species of *Astralium* Link, 1807 (Mollusca, Gastropoda, Turbinidae) from the Philippine Islands

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ABSTRACT. A new species of *Astralium* Link, 1807 (Gastropoda, Turbinidae) is described from the Philippine Islands and compared with similar looking species of *Astralium* from the same area.

INTRODUCTION

During the last few years a handsome little species of the genus *Astralium* Link, 1807 from the Philippines has been offered by shell dealers. This species was most often identified as *Astralium haematragum* (Menke, 1829), but sometimes named as *Astralium heimbürgi* (Dunker, 1882) or as *Astralium mactanense* Habe & Okutani, 1980. However, all these species differ markedly from the specimens offered recently. *Astralium roseobasis* n. sp. is described here as a new species and is compared with the other Philippine species of *Astralium* with a pinkish base and operculum.

Abbreviations

AA: Axel Alf collection, Weidenbach, Germany
GP: Guido Poppe collection, Berchem, Belgium
HD: Henk Dekker collection, Winkel, The Netherlands
KK: Kurt Kreipl collection, Meeresmuseum Öhringen, Germany
MNHN: Museum national d'Histoire Naturelle, Paris, France
SMF: Forschungsinstitut und Naturmuseum Senckenberg, Frankfurt am Main, Germany
ZMA: Zoological Museum, University of Amsterdam, Amsterdam, The Netherlands

SYSTEMATICS

Family: **TURBINIDAE** Rafinesque, 1815
Subfamily: **TURBININAE** Rafinesque, 1815
Genus: *Astralium* Link, 1807
Type species: *Turbo calcar* Linnaeus, 1758; SD Fischer, 1873.

Astralium roseobasis n. sp.

Figs 1-16

Astralium haematragum (Menke, 1829) - Springsteen & Leobrera, 1986: pl. 7 figs 10a-b [non Menke]
Astralium haematragum (Menke, 1829) - Kosuge & Chino, 1998: pl. 26 fig. 7 [non Menke]

Type material. Holotype, ZMA nr. Moll. 4.03.001. Height: 22.5 mm; greatest width: 17.4 mm. Adult, live-taken, with operculum.
Paratype 1, MNHN; paratype 2, SMF; paratypes 3-5, KK; paratypes 6-10, HD 859, 5834, 6516, 10877; paratype 11, AA; paratypes 12-45, GP.

Type locality. Philippine Islands, Cebu Island, Bogo, in 4 meters, on reef.

Other material examined. 5 specimens, HD 6529.

Description. Shell trochiform, thick-shelled and solid, taller than wide, mean height/width is 1.3. The shell is medium-sized for the genus, adult size ranges between 16–24 mm.

Protoconch pinkish-white, about one whorl (usually eroded). Teleoconch of about six whorls; early teleoconch whorls concave, last 2½ whorls convex. Sculpture consisting of strong axial ribs, stronger adapically, crossed by 3-4 very irregular spiral cords of minute beads. The peripheral keel bears short pointed spines, which might be reduced to blunt nodules, or might be absent. Suture not incised. Base sculptured with 7-10 narrow spiral rows of minute scales. Columella smooth. No umbilicus present. Aperture ovate, inside with many lirae.

The colouration of the lower whorls is very variable, basic colour creamy-white, often with bands of pinkish-brown, and with a hue of orange, green or

rarely lemon-yellow. The axial ribs are usually of lighter colour, mostly whitish. The upper whorls are pinkish-brown. Base creamy-white to light brownish with bright purplish-pink towards the columella. Columella and aperture nacreous inside, outer lip with white inner edge. Living specimens are often encrusted by coralline algae.

Operculum calcareous, ovate, thick, not pustulate, with elevation on outer side. Colour pinkish-purple, darker at outer margin.

Distribution. This new species is only known from the central Philippine Islands: Cebu Island (Bogo); Kaoi Island; Caubian Island; Mactan Island (Punta Engaño).

Discussion. Five other species of the genus *Astralium* Link, 1807 with a purplish columella and operculum are known in the Philippines: *Astralium haematragm* (Menke, 1829), *Astralium heimbürgi* (Dunker, 1882), *Astralium mactanense* Habe & Okutani, 1980, *Astralium rhodostomum* (Lamarck, 1822) and *Astralium saturnum* Chino, 1999.

A. haematragm (see e.g. Sasaki, 2000: pl. 48 fig. 35; Lindner, 2001: pl. 8 fig. 10) has a more depressed shape and is straight-sided, the peripheral spines are enlarging the base of the shell. The base is more flattened, often concave. The operculum of *A. haematragm* is white with a purple edge, not completely coloured as in *A. roseobasis* n. sp.

A. heimbürgi (see e.g. Sasaki, 2000: pl. 48 fig. 37; Lindner, 2001: pl. 8 fig. 5) has a very depressed shell, the edge of the aperture and the complete base are coloured purple whereas in *A. roseobasis* n. sp. the apertural edge is white and only the umbilical area is coloured.

A. mactanense (see e.g. Springsteen & Leobrera, 1986: pl. 8 fig. 5) is low conical in shape, sculptured with heavy irregularly spaced, oblique axial ribs (in *A. roseobasis* very regularly spaced) and deep interspaces. The peripheral spines are often interconnected to undulate, wing-like foliations. The

first teleoconch whorls are white in *A. mactanense*, in contrast to pinkish-brown in *A. roseobasis* n. sp.

A. rhodostomum (see e.g. Sasaki, 2000: pl. 48 fig. 36) reaches a much larger adult size (up to 50 mm), has a more depressed-conical shape and the spines along the periphery are much longer and partially open.

A. saturnum (see Chino, 1999: 87-90) has a very flattened shell, much wider than tall. The periphery of each whorl is sharply angulated to form a distinct horizontal flange, which is somewhat undulated.

Etymology. Derived from Latin, meaning "rose-coloured base".

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Figures 1-16. *Bolma roseobasis* n. sp.

1-6. Holotype; Philippines, Cebu Island, Bogo; height 22.5 mm, operculum 6.5 mm wide; ZMA Moll. 4.03.001. 7-8. Paratype 3; Philippines, Cebu Island, Bogo; height 19.9 mm; KK. 9-10. Paratype 4; Philippines, Cebu Island, Bogo; height 23.6 mm; KK. 11-12. Paratype 5; Philippines, Cebu Island, Bogo; height 23.0 mm; KK. 13-14. Paratype 7; Philippines, Kaoi Island (near Cebu); height 19 mm; HD 5834. 15-16. Juvenile; Philippines, Mactan Island, Punta Engaño; 7.0 mm wide; HD 6529.

